Captain Maury.

THE death of Captain Maury, the great American Hydrographer and Meteorologist, which took place at Lexington in Virginia on the 1st ult., deserves something more than an ordinary obituary; for of all the benefactors to the commercial world, in respect of the transit of merchandise from one port to another, the name of Maury stands first and foremost.

His important researches into Oceanic Meteorology, and the happy idea of turning this branch of science to practical account, resulted in a valuable series of wind and current charts, by which the shortest and best routes over the great ocean thoroughfares were indicated—the voyage to Australia or California, for example, to and fro, having been shortened by a month, and other voyages in proportion. Thus an annual saving to the commerce of the world, it is estimated, of no less than several millions sterling, has been effected.

Matthew Fontaine Maury was born in the year 1806 in Spottsylvania County, Virginia, from whence he removed with his parents, at an early age, to the adjoining State of Tennessee.

Manifesting a predilection for maritime pursuits, he entered the United States navy as a midshipman, at the age of nineteen; and in the sloop-of-war *Vincennes* circumnavigated the globe.

During this cruise, which lasted four years, he wrote a 'Treatise on Navigation,' which, with some subsequent revisions, passed through many editions, and is used as a text-book in the United States navy. It was while on this expedition that his attention was drawn to the winds and currents of the ocean, and the possibility of reducing them to a practical science. After eleven years of active service he was promoted to a lieutenancy, and appointed astronomer to the exploring expedition in the Southern Seas. This again gave him further opportunity of pursuing his studies in meteorological science, and subsequently led to his appointment as head of the Hydrographical Board at Washington. Here he commenced the great undertaking with which the name of Maury will be for ever identified. He obtained copies of as many ships' logs as could be procured, and marked the direction of the winds and currents on charts prepared for the purpose. Information of this nature began to pour in until 1842, when he laid before the Hydrographical Board a plan for supplying model log-books to the mercantile marine and naval service. These log-books were designed with a view of

registering observations in a systematic series. His idea was adopted, and in the space of eight years he thus collected a sufficient number of logs to make 200 manuscript volumes of 2500 days each, or nearly seven years of the daily observations of each ship's captain. The digest of these observations gave employment to a large staff of assistants, and resulted in the 'Winds and Currents Charts,' together with two quarto volumes of 'Sailing Directions,' which bear the name of the indefatigable compiler.

To give an idea of the extent and value of this Herculean task it may be sufficient to mention, that the construction of the Wind Chart alone (Plate I. in his 'Physical Geography') was the result of 1,159,353 separate observations on the force and direction of the wind, and upwards of 100,000 observations on the height of the barometer at sea.

The genuinely scientific spirit in which he entered upon the vast work may be gathered from the rule which he tells the maritime world he laid down for himself at the commencement. In the 'Introduction to Explanations and Sailing Directions to accompany the Wind and Current Charts,' he says:

"I wish to announce a rule of conduct by which I have been guided from the commencement of this work, and by which I mean to be guided to the end: for not only has experience proved it wise, but it is in principle so good that to it I attribute much of the success which has attended these labours. This rule has been, to keep the mind unbiassed by theories and speculations; never to have any wish that an investigation would result in favour of this view in preference to that; and never to attempt by premature speculation to anticipate the results of investigation, but always to trust to the observations themselves."

Well would it be for the world and for truth, if all scientific men could be persuaded to adopt the same admirable rule.

Of the great value to maritime countries of meteorological investigations pursued in such a spirit, Maury's friend and coadjutor, the late Admiral Fitzroy, bore ample testimony. "No criticism," wrote that distinguished metereologist to a mutual friend, in 1865,

"No criticism can destroy the intrinsic value of such systems of average as those by which his results were drawn from accumulations of facts. Opinions of their value have not varied since the first consignment reached the Board of Trade in 1854–5. . . . Actual waggon loads of Maury's charts and quarto volumes of 'Directions' have been given away in England; very many also in other countries—all distributed free of charge to the recipients."

In the closing paragraph of this letter, the Admiral alludes to one of his friend's most distinguished traits—personal disinterestedness. It was characteristic of him through life, that he never sought to benefit himself by his arduous labours, or to make pecuniary profit out of his researches; his sole object being to benefit mankind

at large. Even within a few weeks of his death, we find him endeavouring to rouse up his countrymen by most stirring speeches and writings to the importance of the establishment of meteorological boards throughout the world, in order to effect for the farmer and agriculturist on the land what had been so well done for voyagers and for commerce on the ocean.

It was during the intervals of relaxation at Washington, while analysing and tabulating these myriads of observations, that Maury wrote his popular work, 'The Physical Geography of the Sea, and its Meteorology,'—one of the most charming books in the English language. The extent of scientific information which this work conveys, or its easy, unaffected style, cannot be at all gathered from the enumeration of the subjects of which it treats. The work must be read to be appreciated. It would be speaking of it in a very general way to say that it treats of the sea (which it does),—its 'Nature,' 'Currents,' 'Actinometry' and 'Climates';—'The Bed and Basin of the Atlantic,' the 'Influence of the Gulf Stream upon Climates and Commerce.' It treats also of the 'Atmosphere,' 'Winds,' and their 'Geological Agency,' 'Storms' and 'Monsoons,' 'Calm Belts' and 'Sea Breezes,'—the latter being a valuable contribution to the work by his friend Captain Jansen, a distinguished scientific officer of the Dutch navy,—'Rains and Rivers,' the 'Arctic Regions,' and the 'Open Polar Sea,' the 'Antarctic Regions, and their Climatology.'

Of this delightful and instructive work it is said that upwards of twenty editions have been sold in this country alone, to say nothing of America and Europe, where it also finds a large and ready sale; it having been translated into the Dutch, French, Russian, German, Swedish and Italian languages; and in some instances, by order of the national governments for their respective navies.

The interest thus excited in ocean meteorology enabled the distinguished author to give a more cosmopolitan character to that hitherto undeveloped science. Accordingly in the year 1853 he was enabled to assemble at Brussels, under the auspices of King Leopold, a congress of the chief nations interested in commerce—France, Russia, Sweden, Norway, Holland, Denmark, Belgium, Portugal, the United States, and, lastly and tardily, England; each sending its representative. The object of this congress being the still further development of meteorological science, it resulted in recommending the establishment of hydrographical boards throughout Europe, and a uniform system of observation—the principle, it was believed, being as applicable to land as to water. Hence the establishment of our own Meteorological Department of the Board of Trade, over which Admiral Fitzroy presided with such distinguished ability. Although the recommendation was only acted upon by a few of the European

powers (thus crippling the whole scheme), still the important measure of one uniform log and one uniform system of observation was adopted; Prussia, Spain, Sardinia, Oldenburgh and Hanover, the Holy See, the Free Ports of Hamburg and Bremen, the republic of Chili, and the empires of Austria and Brazil, subsequently offering their co-operation.

"Rarely," says Maury, in his account of this congress, "has there been such a sublime spectacle presented to the scientific world before; all nations agreeing to unite and co-operate in carrying out according to the same plan one system of philosophical research with regard to the sea. Though they may be enemies in all else, here they are friends." [One recommendation was that in peace and war alike the Maury log should be held sacred.] "Every ship that navigates the high seas with these charts and blank abstract logs on board may henceforth be regarded as a floating observatory, a temple of science."

At the close of the Congress Maury returned to his old post at Washington, laden with honours and rich in fame. Most of the learned societies in Europe elected him an honorary member of their body. Humboldt declared that "he had founded a new department of science." The Emperor of Russia made him Knight of the Order of St. Ann; the King of Denmark, Knight of the Dannebrog; the King of Portugal, Knight of the Tower and Sword; the King of Belgium, Knight of the Order of St. Leopold; the Emperor of France, Commander of the Legion of Honour; while Prussia, Austria, Sweden, Holland, and Sardinia struck gold medals in his special honour, and the New York merchants presented him with a service of plate and five thousand dollars.

In these demonstrations of acknowledgment England alone stood aloof. We were just then in the midst of the charming delusion that a nautical science unknown to the British Admiralty could be of very little benefit to the world—in fact, was not worth knowing. Time, however, the Russian war, and subsequent events have corrected that delusion.

In the year 1861 the great disruption of the United States on the doctrine of States' sovereignty took place. Maury remained at his post. He never was a politician, and hence he saw with deep regret the extremity to which things were tending. Nor was it until Virginia—his native State—had by formal resolution seceded from the Union, that he conceived it to be his duty, though it never was his inclination, to identify himself with the movement at all. Believing in the sovereign power of each state either to abide in or withdraw from the Union at pleasure—a doctrine which up to that time the leading statesmen of America had almost invariably held, and feeling in honour bound, like Lee, Jackson, and other celebrities, to follow the fortunes of his State, Maury reluctantly resigned his splendid

position at Washington, and withdrew from all connection with the party who were seeking to establish the doctrine of federal union by force of arms. At this juncture the Grand Duke Constantine of Russia offered him a home at St. Petersburg, accompanying the offer by the expression of so much feeling and generosity that we cannot refrain from giving the invitation *in extenso:*

"St. Petersburg, 27th July, 1861.

"My dear Captain Maury,—The news of your having left a service which is so much indebted to your great and successful labours has made a very painful impression on me and my companions in arms. Your indefatigable researches have unveiled the great laws which rule the winds and currents of the ocean, and have placed your name amongst those which will be ever mentioned with feelings of gratitude and respect, not only by professional men, but by all those who pride themselves in the great and noble attainments of the human race. That your name is well known in Russia I need scarcely add, and, though 'barbarians,' as we are still sometimes called, we have been taught to honour in your person disinterested and eminent services to science and mankind.

"Sincerely deploring the inactivity into which the purely political whirlpool in your country has plunged you, I deem myself called upon to invite you to take up your residence in this country, where you may in peace continue your favourite and useful occupations.

"Your position here will be a perfectly independent one. You will be bound by no conditions or engagements, and you will always be at liberty to steer home across the ocean, in the event of your not preferring to cast anchor in our remote corner of the Baltic.

"As regards your material welfare, I beg to assure you that everything will be done by me to make your new home comfortable and agreeable, whilst at the same time the necessary means will be offered you to enable you to continue your scientific pursuits in the way you have been accustomed to.

"I shall now be awaiting your reply, hoping to have the pleasure of soon seeing here so distinguished an officer, whose personal acquaintance it has always been my desire to make, and whom Russia will be proud to welcome on her soil. Believe me, my dear Captain Maury,

"Your sincere well-wisher,

"Constantine,

"*Grand Admiral of Russia.*"

A similar offer was also conveyed to Captain Maury from His Imperial Highness Prince Napoleon, through the French ambassador at Washington; but from a sense of duty to his native State, which Maury thought had a right to his services, if she needed them, both offers were feelingly declined.

Shortly after the withdrawal of Virginia from the Union, Captain Maury, who had been promoted by the Confederate government to the rank of captain, came to England, where he remained during the war. Here he wrote some able articles in defence of the State Rights doctrine, but gave himself chiefly to scientific pursuits. In the application of magneto-electricity to torpedoes he made some important discoveries

the secret of which, with his accustomed generosity, he offered gratuitously to the authorities at Whitehall as a most effective means of coast and harbour defence; but with true British spirit the offer was declined; possibly, on the supposition that what a *British* officer does not know is not worth knowing. Continental governments, however, were not quite so sure of their ground. No fewer than four, and of them, two first-class Powers, sent over two officers each (a naval officer and an engineer) to be instructed by Maury in this new mode of defence.

At the collapse of the war by the surrender of Lee in the spring of 1864, Captain Maury, in common with other men of mark who had espoused the Confederate cause, was not permitted to take up his residence in his native state; yet, desirous of living as near to his "own people" as possible, he took passage for Mexico, and arrived while the Emperor Maximilian, whom he had formerly known at Miramar, was in the midst of his short-lived reign. Entertaining a high opinion of Maury's integrity of character and wisdom in council, and desiring to have "some one about him whom he could trust," the emperor offered him his choice of a post in the Mexican government—an honour which was respectfully but wisely declined. He consented, however, to accept for a time the subordinate position of commissioner of emigration; but soon becoming convinced, from the unreliable character of the Mexican people and the oppressive rule of the French occupation, that the establishment of a stable government in that turbulent country was next to an impossibility, he resigned his position, and returning to England took up his abode in the parish of his friend, the Rev. Dr. Tremlett, at Belsize Park, Hampstead. Here, joined by his family from Virginia, and frequently by his Dutch friend Jansen, he passed the calmest and happiest days of his exile, employing himself chiefly in writing a series of school books on astronomy, political and physical geography, &c., for the schools of the United States. This series is said to have drawn forth the special encomium of the Queen; but as none of the books were published in this country the public had no opportunity of profiting by them.

In the year 1868, the political objection to Maury's return to Virginia having been removed, and a distinguished position—the professorship of Physics—offered to him at the Military Institute at Lexington, in that State, he bade a reluctant adieu to the many warm friends his simple manners and unostentatious life had drawn around him here, though not before a banquet had been given in his honour at Willis's Rooms—a tardy, but at least an English recognition of the great value of his scientific services to the world. At this banquet Sir John Pakington, the then First Lord of the Admiralty, presided, supported by many of the leading scientific men of the day. In

talent and prestige perhaps this was one of the most distinguished gatherings which even those memorable walls had witnessed, and the tribute thus offered to the renowned American was in all respects as hearty as it was deserved. As a parting honour, the University of Cambridge conferred upon him her Honorary Doctor's degree—a compliment with which he was greatly pleased.

During the last four years of his life Maury occupied himself, between the intervals of his professional duties at Lexington, in making a meteorological survey of his beloved Virginia, partly with a view to the development of her resources, and partly in the hope of attracting emigrants to her deserted farms. This survey, so far as it had gone, he embodied in two elaborate and valuable reports; but he was not destined to see the work fully accomplished. In his enthusiastic pursuit of his favourite science he over-taxed his strength, and brought on a return of an old disorder from which he never rallied.

Of his private character it is scarcely possible to speak in terms of too high eulogy. His unimpeachable integrity and strict sense of honour shed a halo of content over his whole life. He never did anything of which his conscience disapproved, and he studied even in minutest matters exactness and moderation. His general knowledge was extensive and accurate, and in his own special science he probably excelled all other men; yet his modesty was so great and his simplicity so charming that a child would feel at home in his company.

His religious feeling was deep and personal. He never obtruded his views upon others, though he died as he lived, in open profession and full communion with the Protestant Episcopal Church of America. On his death-bed he bequeathed a prayer to his children, which he had composed nearly thirty years before and had used every day since. Like the famous prayer of Dr. Johnson, the great lexicographer, its simplicity was touching and sublime.

For the Bible he entertained the highest veneration, and its testimony, so far from being impaired by the progress of scientific discovery, was, to his mind, strengthened. The Book of Job and the Psalms were his favourite parts of the Old Testament, especially the 107th Psalm. Very early in life he felt that "they who go down to the sea in ships, and do their business in great waters, see the works of the Lord and His wonders in the deep," and this impression grew firmer and deeper the more fully his mind grasped the idea of intelligent design.

Although he had not followed the sea as a profession for upwards of thirty years, yet he retained his nautical idiosyncracies to the last. When the final hour had come, and friends were standing around and receiving from his calm and collected spirit farewell messages to those

whom he loved, anxious to know if the supreme moment had come, he faintly inquired, "Am I dragging my anchors?" On being answered in the affirmative, he rejoined, with marked emphasis, "All is well—all is well," and resigning his soul into the hands of Him who gave it, he sank gently back and expired.

Thus passed away at the ripe age of sixty-seven, in the calm dignity and faith of a Christian philosopher, this great pioneer of meteorological science: his eye was not dim nor his mental force abated. And it is said that they whose privilege it was to listen to his conversation and counsels during his last long illness would find it very difficult to turn away from his tomb without the irrepressible conviction that

> "Though his body's under hatches,
> His soul has gone aloft."